

Claims

- 5 **Sub #1** 1. Method for processing IP traffic based on information within TCP headers carried in IP datagrams, in which traffic at least some of the IP datagrams are encrypted, **characterized** in that if an IP datagram to be encrypted contains TCP header information used as a basis for the processing, at least an indication of the information on which the processing is based is placed into the header of said datagram.
- 10 2. A method according to claim 1, **characterized** in that if an IP datagram to be encrypted contains a TCP acknowledgment, an indication of the acknowledgment is placed into the header of said datagram.
- 15 3. A method according to claim 1, **characterized** in that said placing of at least an indication into the header of said datagram comprises placing a copy of at least the information on which the processing is based into the header of said datagram.
- 20 4. A method according to claim 3, **characterized** in that said placing of at least an indication into the header of said datagram comprises placing of all information of a TCP header into the header of said datagram.
- 25 5. A method according to claim 3, **characterized** in that a copy of a TCP acknowledgment number is placed into the header of said datagram.
- 30 6. A method according to claim 3, **characterized** in that a copy of the contents of the window size field of a TCP header is placed into the header of said datagram.
- 35 7. A method according to claim 1, **characterized** in that if said datagram is an IPv4 datagram, said at least an indication is placed in an options field of said datagram.
8. A method according to claim 1, **characterized** in that if said datagram is an IPv6 datagram, said at least an indication is placed in an extension header in said datagram.

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9. A method according to claim 3, in which method

- a source network element generates IP datagrams,
- an intermediate network element forwards the IP datagrams to a destination network element, and

5 - the destination network element receives the IP datagrams,

characterized in that

the intermediate network element modifies said copy of the information on which the processing is based.

10 10. A method according to claim 9, **characterized** in that

said destination network element uses said modified copy of the information instead of the encrypted version of the information carried as the payload of the IP datagram.

15 11. A method according to claim 1, being used in congestion control in a TCP/IP network, **characterized** in that

the method comprises the step of delaying the transmission of an encrypted IP datagram by a network element, if said encrypted IP datagram comprises an indication of a TCP acknowledgment and if said network element detects
20 congestion in the network.

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